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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/496,111	02/01/2000	Brian L. Allen	BUR990217US1	5743

29154 7590 08/13/2003

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EXAMINER

WILLIAMS, DEMETRIA A

ART UNIT	PAPER NUMBER
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2631

DATE MAILED: 08/13/2003

14

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/496,111

Applicant(s)

ALLEN, BRIAN L.

Examiner

Demetria A. Williams

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 February 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,6-11,13-17,19 and 20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,6-11,13-17,19 and 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, 6-9, 11, 13-15, 17, 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eastty et al ("Eastty") in view of McNeely.
3. Regarding claims 1, 8, and 15 Eastty discloses a filter/modulator having an input that is separated into even and odd samples and summation units for processing even and odd samples separately (see generally figure 7; column 5, lines 25-47). The summation units comprise two multipliers directly connected to the input for multiplying the provided samples, and adder for adding the multiplied samples, and delay elements between each summation unit. Looking at figure 7 of the Eastty patent, the first summation unit for even samples consists of elements B1, 61, 71, and C1. Elements B1 and C1 are used for multiplying the samples, element 61 represents the adder, and element 71 is a delay. The summation unit for odd samples consists of elements A1, 61, 71, and C1, which operate in a manner similar to that of the odd samples. Even though the "summation units" are integrated, as opposed to separate as claimed by the applicant, making items separable does not patentably distinguish the claimed invention over the prior art.

Eastty does not disclose separate outputs for the even and odd samples, but instead sums them together and outputs an integrated signal. McNeely discloses a filter where odd and even samples are output separately (see generally column 4, lines 1 – 65). It would have been obvious

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to one of ordinary skill in the art at the time of the invention to modify the teachings of Eastty to include separate outputs for even and odd samples, as taught by McNeely, for those applications required continued processing of the signals separately.

4. Regarding claims 2 and 9, Eastty further discloses that the delay elements are connected to an adder of each “summation unit” (see generally figure 7; column 5, lines 25-47).

5. Regarding claims 3, 10, and 16, McNeely further discloses that the filter includes an initial delay element and multiplier (see generally figure 4; column 4, lines 1 – 65. It would have been obvious to one of ordinary skill in the art at the time of the invention to include these additional elements initialize the filter.

6. Regarding claims 4, 11, and 17, Eastty further discloses that the multipliers receive the samples directly from the input, before being delayed (see generally figure 7; column 5, lines 25-47).

7. Regarding claims 6, 13, and 19 Eastty discloses that each adder receives and odd multiplied sample from one multiplier and an even multiplied sample from the other multiplier (see generally figure 7; column 5, lines 25-47).

8. Regarding claims 7, 14, and 20, Eastty discloses all of the elements as described above. However, as explained in reference to claim 1, the even and odd “summation units” are integrated as opposed to separate. Because of this, each adder receives three samples. However, it would have been obvious to one of ordinary skill in the art that given separate units for even and odd, each adder would only receive two samples.

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Response to Arguments

9. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Demetria A. Williams whose telephone number is (703) 305-4078. The examiner can normally be reached on Monday - Friday, 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on (703) 306-3034. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3800.

daw
August 7, 2003



**DON N. VO
PRIMARY EXAMINER**